

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-16. (Canceled)

17. (Currently amended) A method of testing a ~~selected~~ pixel to determine whether it is faulty, the method comprising:

(i) electronically resetting the selected pixel to a defined charge;

(ii) delay reading the selected pixel for a defined length of time that corresponds approximately to the exposure time of the pixel while in use;

(~~ii~~)(iii) reading the selected pixel's output; and

(~~iii~~)(iv) comparing the selected pixel's output to an expected value based upon the defined charge provided to the selected pixel, whereby if the selected pixel's output deviates from said expected value, designating the selected pixel as partially or completely corrupted.

18. (Original) The method of claim 17, wherein if the selected pixel is partially corrupted pixel, it is to be imaged by a first technique during readout and if the selected pixel is completely corrupted, it is to be imaged by a second technique during readout.

19. (Original) The method of claim 18, wherein determining whether the selected pixel is partially or completely corrupted comprises determining how far the selected pixel's output deviates from the expected value, such that if the selected pixel's output deviates by more than a defined amount from the expected value deeming the selected pixel to be completely corrupted and if the selected pixel's output deviates by no more than a defined amount from the expected value deeming the selected pixel to be partially corrupted.

20. (Original) The method of claim 18, wherein the first correction technique comprises adjusting the output of the selected pixel and wherein the second correction technique comprises replacing the output of the selected pixel with an average of the outputs of pixels located about the selected pixel.

21. (Currently amended) The method of claim 17, further comprising:

~~if the selected pixel is found to be faulty, storing its location in memory.~~
selecting a pixel to test.

22. (Currently amended) The method of claim 17, ~~further comprising wherein the~~
electronically resetting comprises:

~~exposing the selected pixel to a defined amount of test radiation, after electronically resetting the selected pixel and prior to reading the selected pixel's output.~~

switching on a transistor associated with the selected pixel;
discharging a photodiode associated with the selected pixel; and,
switching off the transistor associated with the selected pixel.

23-37. (Canceled)

38. (Currently amended) A method for characterizing a pixel, comprising:

setting a pixel voltage to a reset voltage, wherein the reset voltage corresponds to the state of the pixel when the pixel has been exposed to substantially no radiation, the setting operation comprising switching on a transistor associated with the selected pixel, discharging a photodiode associated with the selected pixel, and switching off the transistor associated with the selected pixel;
charging the pixel with a defined voltage;
measuring the output voltage of the pixel ~~charged with the defined voltage;~~ and
determining if the pixel is partially corrupted or completely corrupted, wherein the determination of partial or complete corruption is based at least partially on the amount of deviation between the output voltage and the defined voltage; and,
applying a type of pixel correction mechanism.

39. (Original) The method of claim 38, wherein the type of pixel correction mechanism applied is based on whether the pixel is partially or completely corrupted.

40. (Original) The method of claim 38, further comprising determining if the pixel is partially saturated or completely saturated.

41. (Original) The method of claim 40, wherein the type of pixel correction mechanism applied is based on whether the pixel is partially or completely saturated.

42. (Original) The method of claim 41, wherein determining if the pixel is partially saturated or completely saturated only occurs if the pixel is determined to be partially corrupted.

43. (Currently amended) The method of claim 39 ~~42~~, wherein if the pixel is partially corrupted and not saturated, it is to be imaged by a first technique during readout and if the selected pixel is completely corrupted or both partially corrupted and saturated, it is to be imaged by a second technique during readout, wherein the first and second techniques are different.

44. (Original) The method of claim 43, wherein the second technique is masking.

45. (Original) The method of claim 44, wherein the first technique comprises adjusting the output of the pixel by a fixed percentage.

46. (Original) The method of claim 43, further comprising storing the location and the characterization of the pixel.

47. (Currently Amended) A apparatus for characterizing a pixel, comprising:
means for setting a pixel voltage to a reset voltage, wherein the reset voltage corresponds to the state of the pixel when the pixel has been exposed to substantially no radiation;
means for charging the pixel with a defined voltage;
means for measuring the output voltage of the pixel charged with the defined voltage;
means for waiting a defined length of time that corresponds approximately to the exposure time of the pixel while in use between charging the pixel and measuring the output voltage;
and,

means for determining if the pixel is partially corrupted or completely corrupted, wherein the determination of partial or complete corruption is based at least partially on the amount of deviation between the output voltage and the defined voltage.

48. (Original) The apparatus of claim 47, wherein the type of pixel correction mechanism applied is based on whether the pixel is partially or completely corrupted.

49. (Original) The apparatus of claim 47, further comprising means for determining if the pixel is partially saturated or completely saturated.

50. (Canceled)

51. (New) A method of testing a pixel comprising:

- (i) selecting a pixel to test;
- (ii) switching on a transistor associated with the selected pixel;
- (iii) discharging a photodiode associated with the selected pixel;
- (iv) switching off the transistor associated with the selected pixel;
- (v) waiting for a for a defined length of time that corresponds approximately to the exposure time of the pixel while in use;
- (vi) reading the selected pixel's output;
- (vii) comparing the selected pixel's output to an expected value; and,
- (viii) determining if the pixel is partially corrupted or completely corrupted.

52. (New) The method of claim 51, wherein discharging the photodiode resets the photodiode to a reset voltage corresponding to a voltage associated with no radiation being sensed by the pixel).